

REMARKS

This Amendment is responsive to the Office Action dated August 1, 2003. All rejections and objections of the Examiner are respectfully traversed. Reconsideration and further examination is respectfully requested.

At paragraphs 3-4 of the Office Action, the Examiner rejected claims 1-33 as being anticipated under 35 U.S.C. 102, citing United States patent number 5,509,123 of Dobbins et al. ("Dobbins et al."). Applicants respectfully traverse this rejection.

Dobbins et al. disclose an object-oriented architecture for network layer routing, which distributes function and system behavior into autonomous router objects. Dobbins et al. disclose that a separate forwarding engine may be provided at each network interface. Additionally, Dobbins et al. teach that each object in the system may have certain *capabilities*, described as protocol-independent functions, such as the objects own configuration information, accessibility through a router resource object for instantiation and control, automatic persistence, remote management capabilities, and text names for navigation of a resource tree as a file system. The router objects of Dobbins et al. have three types of imbedded *functionality* built in, described as including the common protocol-independent functions of the object, such as a routing function or a system function, the functions provided by a base resource object class which define the methods and data for configuration and control, and the functions provided by the managed object class which define the methods and data for network management.

The system architecture described by Dobbins et al. includes four horizontally disposed functional subsystem "planes" for routing applications, host communications, forwarding, and network interfaces. Each subsystem plane in Dobbins et al. may include multiple object

- instances, and logical connections are provided between such planes through resource objects, and a naming tree.

Nowhere in Dobbins et al. is there disclosed or suggested *an application programming interface to a forwarding plane* that includes an input module that receives *function calls*, *wherein the function calls include input control data, a control module that receives the input control data via the function calls, the control module producing output control data based upon the input control data, the output control data being capable of controlling execution of the forwarding plane*, as in the present independent claims 1, 9, 18, 21 and 29.

As indicated above, the "functions" described as being common to all objects in the Dobbins et al., as well as the protocol-independent "functions" of the router objects in Dobbins et al. are not "function calls", as the present independent claims, but rather descriptions of the *capabilities* and/or *functionality* of the corresponding components of the Dobbins et al. system. Those skilled in the art will recognize that such descriptions of capabilities and functionality are categorically different in kind from the function calls in the present independent claims. Moreover, in distinct contrast to the present invention as set forth in the independent claims, Dobbins et al. describe a completely different technique for passing control information to a control plane in a network device. Specifically, Dobbins et al. teach using a *shared message queue* to pass the input control information to the forwarding plane. As shown in Fig. 3A of Dobbins et al., a shared memory queue 232 within the router components 215 is used to communicate between the routing components 215 and the routing applications 201. This is a different type of interface to the forwarding plane. The logical connections 205 between the routing components 215 and the routing applications in Dobbins et al. are described as being facilitated by resource objects and a naming tree, in combination with the shared memory queue

232. There is no mention of any kind in Dobbins et al. of even the possibility or desirability of providing any kind of Application Programming Interface (API) with regard to a forwarding plane, much less an Application Programming Interface in which in which input control data is passed in function calls to be used as control data with regard to operation of the forwarding plane, as in the present independent claims.

For the above reasons, Applicants respectfully submit that Dobbins et al. does not disclose or suggest all the features of the present independent claims 1, 9, 18, 21 and 29. Accordingly, Dobbins et al. does not anticipate the present independent claims 1, 9, 18, 21 and 29 under 35 U.S.C. 102. As to the remaining claims, they each depend from either claim 1, 9, 18, 21 or 29, and are believed to be patentable over Dobbins et al. for at least the same reasons. Reconsideration of all pending claims is respectfully requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone the undersigned Attorney at 978-264-6664 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

  
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